

AVAILABILITY, ACCESSIBILITY AND USABILITY OF ELECTRONIC-LEARNING TOOLS IN NORTH-WEST NIGERIA UNIVERSITIES AMIDST COVID-19 AND RURAL BANDITRY

*¹Isah Maccido, ²Nasiru Muhammad Dogon Daji, & ³Aminu Umar Yabo

*^{1&2}Department of science education,
Faculty of Education,
Sokoto State University, Sokoto, Nigeria
Email: Isah.maccido20@gmail.com¹ OR nasir.dogondaji20@gmail.com²

²Department of Integrated Science,
Shehu Shagari College of Education Sokoto, Nigeria
Email: aminuabeyabo@gmail.com

Abstract

The research "Availability, accessibility and usability of electronic-learning tools in north-west Nigeria universities amidst covid-19 and rural banditry" was guided by three (3) objectives and three (3) research questions. A cross-sectional survey research design was employed in the study. The study used both quantitative and qualitative methods for data collection. The population of the study were 175,928 participants comprising of 10,402 academic staffs and 165,526 undergraduate students in 17 public universities (federal and state own) in north-west, Nigeria. Cluster sampling technique was employed in selecting three (3) public universities as a sample. The entire sample chosen were 537 consisting of 31 academic staff and 506 undergraduate students in faculty of education from three (3) public universities in north-west, Nigeria. The instruments used were questionnaires for quantitative data collections and interview schedules for qualitative data collection. Frequency count, mean and simple percentage were used to answer the three (3) research questions stated. The major findings of the study revealed that, there was an adequate available, favourable access policies and moderate used of e-learning tools in teaching and learning at the universities of north-west Nigeria amidst covid-19 and rural banditry. Similarly, also it shows that some of the academic staffs and undergraduate students encountered different challenges in using e-learning tools for teaching and learning where by lack of constant electricity supply, bureaucratic bottleneck of the ICT centre's administrator in terms of accessibility policy, lack of ICT skills, etc. are some of the Major challenges. Moreover, the study recommended that the university vice chancellors and head of ICT units should try to consider and suspend accessibility policy in usage of e-learning tools to enhance effective use of e-learning tools in the teaching and learning in universities.

Keywords: E-learning, availability, accessibility, usability, covid19 and rural banditry

Introduction

The impact of e-learning in human life, learning inclusive are numerous and its roles in tertiary education too cannot be subsided particularly, with the current scenario of Covid-19 and rural banditry in Nigeria, the contribution of e-learning has gained momentum due

to the closure of educational institutions in North-West region of Nigeria and other part of the country which raised challenges for students learning. During this period, e-learning are serving the solution for the ongoing learning processes through innovations and learning management systems (Zayabalaradjan, 2020 & Muzaffar et-al, 2020). E-learning can provide opportunities for academic staff to implement information technology solutions for teaching as well as evaluation for the completion of coursework of the undergraduate students. Academic Staff and undergraduate students across the world have accepted and appreciated the electronic form of learning. The rationales behind the acceptance are ease of use, learning flexibility and controllable environment.

Electronic-learning (e-learning) is commonly referred to the intentional use of networked information and communications technology in teaching and learning (Hassan et-al, 2022). A number of other terms are also used to describe this mode of teaching and learning. They include online learning, virtual learning, distributed learning, network and web-based learning. Fundamentally, they all refer to educational processes that utilize information and communications technology to mediate asynchronous as well as synchronous learning and teaching activities. On closer scrutiny, however, it will be clear that these labels refer to slightly different educational processes and as such they cannot be used synonymously with the term e-learning. The term e-learning comprises a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. As the letter “e” in e-learning stands for the word “electronic”, e-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or standalone computers and other electronic devices.

Availability means the state of having sufficient of something/ presence of an items of the same kind in the various places under study. Ajayi (2013) viewed availability as a conflict with the observed facts on the ground, while items of the same kind were available in large quantity, variety was absent. He continues further to state that accessibility was determined to a large extent by bureaucratic bottleneck of documented policies on where and when to release the e-learning tools or materials. Usability refers to the degree to which the e-learning tools or materials are allowed or in readiness to be used.

University was defined by Dictionary.com (n.d) as an Institution of higher education (typically accepting students from the age of about 17 or 18, depending on country, but in some exceptional cases able to take younger students) where subjects are studied and researched in depth and degrees are offered. Nigeria has 36 states and a Federal Capital Territory (FCT) - Abuja. These states are also further classified into a geo political zone. There are six (6) geo political zones namely - South West, South-South, North Central, South East, North West and North East; there are federal universities in each of all the 36 states in Nigeria, including the FCT. Likewise, each state has its University, that is each state in Nigeria has at least two universities- One federal university and one State University and The north west Zone (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara) has ten (10) public federal universities plus seven (7) State own public Universities and has the highest number of federal universities.

World Health Organization (WHO) on March 11, 2020, declared Covid-19 as pandemic and since then, its spread worsened and many deaths cases continue occurring. The federal government through the ministry of education directed the closed down of all

educational institutions like tertiary, secondary and primary schools nationwide over the outbreak of the Corona virus in Nigeria (Premium times, 2020).

Rural banditry started in Zamfara around 2011, as a traditional farmer-herder conflict or insignificant rural unrest, transforming into full-blown conflict, engulfing most parts of the north-west. Multiple factors/ actors account for the transformation of the conflict (Rufa'i, 2021). Since then north-west region was divided into bandits' camps and each area/ zone are allocated to a particular leader. Niger and Kaduna states are Gide's territory; under him are smaller camps with loyalty and allegiance to individual leaders. Katsina was controlled by late Auwalun Daudawa and Dangotte Ba zamfare, under them also are large numbers of mini gang leaders. In Sokoto state, particularly the eastern part is under the jurisdiction of Turji, while there are numerous leaders in Zamfara state.

Rural banditry has disrupted the educational system in north west region Nigeria; most states in the country have resulted in temporarily closure of all educational institutions in an attempt to contain the spread of the pandemic and rural banditry (Adeoye, Adanikin & Adanikin, 2020). Rural banditry also had a severe influence on educational institutions as educational institutions in North-West region of Nigeria were suffering from villages school shutdowns, merging of some schools with other school within the capitals of the states and shifting of schooling mode from boarding to day school in response to Covid-19 and rural banditry measures. Although some universities were quick to replace face-to-face lectures with online learning, these shutting affected education and research as well as the safety and legal status of international students in their host country. Perhaps most importantly, the covid-19 and rural banditry rises difficulties about the value offered by a university education which includes networking and social opportunities as well as educational content. To continue as vital, Universities must to reinvent their educations so that digitalization multiplies and supplements instructional process (Schleicher, 2020).

The trend of handling teaching and learning in 21st century is changing speedily in most of the societies in the world now as a result of scientific and technological advancements which gives birth to what is called Information and Communication Technology (ICT) like e-learning, thus educational institutions and agencies have to take of this and embrace the use of e-learning instructions. In this era of covid-19 and rural banditry, e-learning was accepted by all as universal remedy when our villages schools were temporarily shut down, merged of some schools with other school within the capitals of the state and shifting of schooling mode from boarding to a day schools as a result of novice challenges of covid-19 and rural banditry. Despite the different calls to contain the Corona Virus and rural banditry, a growing number of educational institutions have shut down in regards to face-to-face classes in North-West Nigeria. Educational sector globally is seen to be shifting towards e-learning in order to cushion the effect of this Covid-19 and rural banditry in some developing countries, similarly, Nigeria is also posed with the challenge of shifting from the traditional teaching method to the e-learning during the Covid-19 and rural banditry. There are numerous challenges paced as a result of the varying degree of preparedness and use of the e-learning in universities which ranges from availability, accessibility and usability of the e-learning tools in the universities as observed by veteran researchers, that is why this study seek to evaluate the Availability, accessibility and usability of electronic-learning tools in north-west Nigeria universities amidst covid-19 and rural banditry.

Statement of the Problem

The temporarily closing of schools at all levels in Nigeria on 19th march, 2020 as directed by federal ministry of education (Nlebem, 2020) and subsequent closing of some educational institutions in north-west geo-political zone, as a measure to control the spread of Covid-19 and rural banditry as a novel challenge which attract the attention of leaders, educationists, researchers and students to look for other substitute to instructions was one of the right directions need to find it alternative. The use of e-learning among the populaces in the country is encouraging and is on daily basis. However, various researches conducted by the researchers like Sing & Chantahien (2008) and Ajayi (2013) showed that e-learning are not been available, accessible and usable for instructions in the Universities in spite of the fact that many academic staff and undergraduate students spend a lot of their precious time on the e-learning without utilizing it in different opportunities' of gathering Information for school work, educational networking, researches and collaborations. E-learning is the only way that can be used during covid-19 and rural banditry to facilitate teaching and Learning. If it continues to be unavailable, inaccessible and not usable to both academic staff and undergraduate students during the period of covid-19 pandemic and rural banditry they may end of being at home doing nothing and they may engage in criminal act, as such there is need to evaluate the availability, accessibility and usability of electronic-learning tools in north-west Nigeria universities amidst covid-19 and rural banditry

Objectives of the study

The study aimed to find out the extent of availability, accessibility and usability of e-learning in universities of North-West Nigeria, amidst covid-19 and rural banditry for teaching and learning, with the following specific objectives:

- I. To investigate the availability of e-learning tools in universities of North-West Nigeria, amidst covid-19 and rural banditry.
- II. To determine the accessibility of e-learning tools in universities of North-West Nigeria, amidst covid-19 and rural banditry.
- III. To find out the extent of usability of e-learning tools in universities of North-West Nigeria, amidst covid-19 and rural banditry.

Research Questions

- I. To what extent are e-learning tools available in Universities of North-West Nigeria amidst covid-19 and rural banditry?
- II. To what extent are e-learning tools accessible in Universities in North-West Nigeria amidst covid-19 and rural banditry?
- III. To what extent are e-learning tools use in Universities in North-West region of Nigeria amidst covid-19 and rural banditry?

Methodology

Survey research design was used in the study, specifically, the cross sectional survey. The selection of the design allowed the researcher(s) to collect data from a representative sample of a large population and use the results obtained to draw inference on the population (Ajayi, 2013). Zubairu (2014) viewed it ,as allowing a group of people or

items to be studied by collecting and analysing data from a reasonable number of respondents or items to be Considered as representative of the entire group. Furthermore, the study used both quantitative and qualitative methods of data collection through the use of quantitative statistics.

The target population of the study were academic staff and the undergraduate students in the 17 public Universities of North-West Nigeria. According to the National Universities Commission as cited by Mogaji (2019) there are a total of 17 (federal and state own) public Universities in North-West, Nigeria. A total of One hundred and seventy-five thousand, nine hundred and twenty-eight (175,928) participants comprising of 10,402 academic staff and 165,526 undergraduate students from seventeen public universities in North-West Nigeria. The distribution of the Population is presented in appendix 1:

Cluster sampling technique was used to select the sample from the population that was adequately a representative sample of the population. The study used two stage clusters, Firstly, stage 1 universities were group into cluster 1,2 and 3 base on the fact that each cluster has same characteristics in their states and shown below

- I. Universities in Kano State + Universities in Jigawa state
- II. Universities in Kastina State + Universities in Kaduna state
- III. Universities in Sokoto State + Universities in Kebbi State+ Universities in Zamfara State.

Secondly, a simple random sampling was used to select the three (3) public universities each representing its cluster out of the seventeen (17) public universities in North-West, Nigeria. The sample drawn was 537, comprising of 506 undergraduate students and 31 academic staff from faculty of education in the three North-West universities, Nigeria for quantitative data collection, as guided by G.Power tools ample size. Out of the sample respondents 39 respondents was used purposively during the interview, these comprised of 30 undergraduate students and 9 academic staff in faculty of education from the three universities selected, 10 undergraduate students and 3 academics staff was interviewed from each university. The distribution of the samples was presented in table 1 and table 2.

Table 1: Undergraduate Students and Academic Staff Sample in Universities of North-West, Nigeria. For quantitative Data.

S/N	Name of University	Academic Staff Sample	Undergrad Students Sample	Total Sample
1.	Ahmad Bello University Zaria, Zaria, Kaduna State	19	257	276
2.	Bayero University Kano, Kano, Kano State.	10	225	231
3.	Kebbi State University of Science and Technology Aliero, Aliero, Kebbi State.	2	224	226
Total		31	506	537

Source: Researcher’s field work, 2022.

Table 2: Undergraduate Students and Academic Staff Sample in Universities of North-West, Nigeria. For qualitative Data.

S/N	Name of University	Academic Staff Sample	Undergrad Students Sample	Total Sample
1.	Ahmad Bello University Zaria, Zaria, Kaduna State	3	10	13
2.	Bayero University Kano, Kano, Kano State.	3	10	13

3. Kebbi State University of Science and Technology Aliero, Aliero, Kebbi State.	3	10	13
Total	9	30	39

Source: Researcher's field work, 2022.

Four instruments were used for data collection; they were questionnaires, for Undergraduate Students and Academic Staff and interview schedules for undergraduate students and academic staff, the instruments were named and Tags as Electronic-learning Questionnaire for Undergraduate Students (ELQUS), as Electronic-learning Questionnaire for Academic Staff (ELQAS), Undergraduate Students Interview Schedule (USIS) and Academic Staff Interview Schedule (ASIS). Questionnaire on evaluation of electronic media availability, accessibility and usability in national open University of Nigeria in North Central zone was adapted for the study. The questionnaire has three sections of A, B, and C. Section A of the instruments deals with the e-learning availability, while Section B concerned with the e-learning accessibility, and Section C focused on e-learning usability. In Section A, the respondents are to tick the blanks where applicable that best reflect his/ her opinion using four (4) points scale of Much Available (MA)=4, Available (A) =3, Few available (FA) =2, Not Available (NA)=1, likewise in Section B the respondents are to tick the blanks where applicable that best reflect his/ her opinion using four (4) points scale of Very Favourable access Policy (VFAP)=4, Favourable Access Policy (FAP) =3, Fairly Favourable access Policy (FFAP) =2, Non access Policy (NAP)=1 and In Section C of the instruments the respondents are ask to tick the blanks where applicable that best reflect his/ her opinion using four (4) points scale of At Least Once Per Week (ALOPW)=4, Once Per Month (OPM) =3, Once Per Year (OPY) =2, Never (N)=1. The second instruments used for data collection were interview schedule; these yielded first-hand information about the availability, accessibility and usability of e-learning tools in universities of North-West, Nigeria. it comprised of 16 questions on e-learning items in the availability, accessibility and usability of Electronic-Learning tools in Universities in North-West region of Nigeria, the questions elicited information from the participants. The 10 Undergraduate students and 3 academic Staff in faculty of education selected from each sampled Universities was interviewed.

The validity of the four instruments (ELQUS, ELQAS, USIS and ASIS) were determined by giving it to experts in the Department of Science Education, Test, Measurements and evaluation unit of Curriculum Department, Faculty of Education, Sokoto State University, Sokoto state, Nigeria for judgements. These experts were given the copies of the instruments, topic of the study, aim and objectives and research questions as guide, to judge the adequacy of the items in the instruments by adding or modify relevant information omitted.

The measure of internal consistency of the ELQUS and ELQAS was determine by the Cronbatch's Alpha and subjected to Pearson's product moment correlation co-efficient, the value of 0.76 was obtained and considered good for used in the study. A direct method of data collection was used in the study. The data collected was also, analysed using Statistical Package for Social Science (SPSS) version 20:0. Data was analysed in three stages, which were: availability of e-Learning Tools; accessibility of e-learning tools; and usability of e-learning tools respectively as in the instruments. the study used frequency count and mean to answered the research questions for quantitative data; by using the mean criterion of the 2.5 obtained from four points Likert's scale as criteria for

accepting or otherwise i.e. $4+3+2+1/4 = 2.5$. While, the qualitative data collected from interview schedule was answered through coding system using frequency count and percentage.

Results

In this section, the research questions were answered by data obtained in the course of the study i.e. questionnaires and interview. frequency count and mean were used to answered research question one, two and three. The summaries of each research questions results were presented in table 3, table 4 and table 5 respectively for quantitative data. Moreover, the three (3) research questions were also answered using frequency count and percentage for qualitative data, the summaries of the results of them were presented in table 6, 7, 8, 9, 10 and 11.

Research question one: To what extent are e-learning tools available in Universities of North-West Nigeria amidst covid-19 and rural banditry?

Table 3: Extent of e-learning tools Availability for Instruction in Universities of North-West Nigeria amidst covid-19 and rural banditry

Result from table 3 indicated that the extent of availability of e-learning tools (Computer system, Fax machine, Radio, audio cassettes recorder/player, microphone/speaker system,

S/N	E-LEARNING ITEMS	RESPONSES				mean
		(4) much available frequency	(3) available frequency	(2) fairly available frequency	(1) not available frequency	
1	Computer System	309	203	18	7	3.52
2	Fax Machine	234	291	5	0	3.93
3	Radio	216	269	26	11	3.87
4	Audio cassettes recorder/player	362	141	18	16	3.98
5	Microphone/ speaker System	387	118	0	31	3.97
6	Flash Drive/modem	237	255	9	36	3.98
7	Television	150	280	62	22	3.80
8	Video cassettes recorder/ player	219	274	26	13	3.94
9	Internet connectivity/ Web environment	244	144	40	16	3.28
10	Telephone/intercom	245	190	79	17	3.25
11	CD-ROMs	286	175	51	15	3.90
12	Electronic board	244	144	40	16	3.28
13	Overhead/opaque projector	323	112	56	45	3.33
14	Film strip projector	178	347	2	8	3.30
15	Slide projector	236	187	94	19	3.19
16	Smart/Android phone	120	290	87	34	2.93
	mean of the means					3.28

Flash drive/ Modem, Television, video cassettes recorder/player, Internet

connectivity/web environment, Telephone/intercom, CD-ROMs, Electronic board, Overhead/opaque projector, film strip projector and Slide projector) for teaching and learning in Universities of North-West Nigeria amidst covid-19 and rural banditry were adequately available, because, all the means of the e-learning items was bigger than the mean criterion i.e. 2.50. a further analysis was also done by comparing the mean of means i.e. 3.28 with the mean criterion i.e. 2.50. the overall overview of the data in table 3 shows that a lot of e-learning tools were readily available to the respondents at the universities of north-west Nigeria.

Research question two: To what extent are e-learning tools accessible in Universities in North-West Nigeria amidst covid-19 and rural banditry?

Table 4: Extent of e-learning tools Accessibility for Instruction in Universities in North-West Nigeria amidst covid-19 and rural banditry.

S/n	E-learning items	Responses				mean
		(4) very access frequency	favourable policy	(3) favourable access frequency	(2) fairly favourable access frequency	
1	Computer System	2	28	387	118	1.84
2	Fax Machine	84	134	219	100	2.38
3	Radio	192	128	66	144	2.69
4	Audio cassettes recorder/player	266	58	56	153	2.82
5	Microphone/speaker System	195	124	122	96	2.77
6	Flash Drive/Modem	108	378	31	18	3.08
7	Television	265	86	34	150	2.87
8	Video cassettes recorder/ player	222	106	57	152	2.80
9	Internet connectivity/ Web environment	106	82	176	156	2.27
10	Telephone/intercom	245	190	79	17	3.25
11	CD-ROMs	294	87	116	34	3.21
12	Electronic board	82	64	146	243	1.97
13	Overhead/opaque projector	323	112	56	45	3.33
14	Film strip projector	178	347	2	8	3.30
15	Slide projector	79	146	162	148	2.29
16	Smart/Android	237	36	255	9	2.93

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

Formatted: Font:

phone
mean of the
means

2.74

Formatted: Font:

Result from table 4 indicated that the extent of accessibility of e-learning tools (Computer system, Fax machine, Radio, audio cassettes recorder/player, microphone/speaker system, Flash drive/ Modem, Television, video cassettes recorder/player, Internet connectivity/web environment, Telephone/intercom, CD-ROMs, Electronic board, Overhead/opaque projector, film strip projector and Slide projector) for teaching and learning in Universities of North-West Nigeria amidst covid-19 and rural banditry had favourable access policy, because, the means of the ten (10) out of the sixteen (16) stated e-learning items was bigger than the mean criterion i.e. 2.50. a further analysis was also done by comparing the mean of means i.e. 2.74 with the mean criterion i.e. 2.50.

Research question three: To what extent are e-learning tools use in Universities in North-West region of Nigeria amidst covid-19 and rural banditry?

Table 5: Extent of e-learning tools usability for Instruction in Universities in North-West region of Nigeria amidst covid-19 and rural banditry

S/ n	E-learning item	Percentage responses				mean
		(4) at least once per day frequency (alopd)	(3) once per week frequency (opw)	(2) once per month frequency (opm)	(1) never used frequency (nu)	
1	Computer System	23	76	252	184	1.90
2	Fax Machine	18	45	258	215	1.70
3	Radio	231	283	08	15	3.50
4	Audio cassettes recorder/player	205	286	15	31	3.20
5	Microphone/speaker System	125	215	85	112	2.70
6	Flash Drive/Modem	103	187	144	101	2.55
7	Television	228	248	38	23	3.30
8	Video cassettes recorder/ player	125	215	114	83	2.60
9	Internet connectivity/ Web environment	88	96	197	156	2.22
10	Telephone/intercom	157	203	75	102	2.80
11	CD-ROMs	52	77	246	162	2.20
12	Electronic board	60	31	262	180	1.95
13	Overhead/opaque projector	163	74	252	48	2.66
14	Film strip	200	43	274	20	2.79

	projector					
15	Slide projector	178	68	236	54	2.69
16	Smart/Android phone	231	74	169	63	2.88
	mean of the means					2.60

Result from table 5 shows that the usability of e-learning tools (Computer system, Fax machine, Radio, audio cassettes recorder/player, microphone/speaker system, Flash drive/Modem, Television, video cassettes recorder/player, Internet connectivity/web environment, Telephone/intercom, CD-ROMs, Electronic board, Overhead/opaque projector, film strip projector and Slide projector) for teaching and learning in Universities of North-West Nigeria amidst covid-19 and rural banditry were moderately used by the respondents, because, the means of the eleven (11) e-learning items was bigger than the mean criterion i.e. 2.50. a further analysis was also done by comparing the mean of means i.e. 2.60 with the mean criterion i.e. 2.50. the overall overview of the data in table 5 additionally revealed computer system, fax machine, internet/web environment and projectors had a lower usage in terms of their mean respondents at the universities of north-west Nigeria.

Individual Interview

The individual interview was conducted with undergraduate students and academic staffs in the sampled universities of north-western Nigeria. There are some features of an interview report according to Ismaila (2020), which are: themes and contents; methodology and methods (from designing to interviewing, transcription and analysis); result (the data analysis, interpretation and verification); and discussion.

The target was to shorten all of the data to key themes and topics that can elucidated the research questions; you need to code the material. A code is an expression or a short phrase/word that descriptively captures the essence of basics of your material (e.g. a quotation) and is the first step in the data reduction and interpretation (Ismail, 2020). The codes that were used for this study were: availability X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12, X13, X14, X15 and X16 while accessibility and usability Y1, Y2, Y3, Y4, Y5, Y6, Y7, Y8, Y9, Y10, Y11, Y12, Y13, Y14, Y15 and Y16 and Z1, Z2, Z3, Z4, Z5, Z6, Z7, Z8, Z9, Z10, Z11, Z12, Z13, Z14, Z15 and Z16.

Research questions were answered using frequency and percentage. Summary of the analysis was presented in Tables below.

Table 6: undergraduate students' opinion on the availability of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Available	19	63
2	Non available	11	37
	Total	30	100

Table 6 above shows that the undergraduate students' opinion on the availability of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry there were enough available e-learning tools at the universities in north-west, because 19 respondents representing 63% said there were available e-learning tools, while 11

respondents representing 37% responded to non-available e-learning tools in universities of north-west.

Table 7: undergraduate students’ opinion on the accessibility of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Accessible	17	56.7
2	Non accessible	13	43.3
	Total	30	100

Table 7 above shows the undergraduate students’ opinion on the accessibility of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry there was high level of accessibility of e-learning tools at the universities in north-west, because 17 respondents representing 56.7% said there was are favourable access policy of e-learning tools, while 13 respondents representing 43.3% responded to non-favourable access policy of e-learning tools in universities of north-west.

Table 8: undergraduate students’ opinion on the usability of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Used	16	53.3
2	Un-used	14	46.7
	Total	30	100

Table 8 above shows the undergraduate students’ opinion on the usability of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry there was moderate level of usage of e-learning tools at the universities in north-west, because 16 respondents representing 53.3% said there were using of e-learning tools, while 14 respondents representing 46.7% responded to non-usage of e-learning tools in universities of north-west.

Table 9: Academic staffs’ opinion on the availability of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Available	07	78
2	Not available	02	22
	Total	09	100

Table 9 above shows the academic staffs’ opinion on the availability of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry that there were enough available e-learning tools at the universities in north-west, because 07 respondents representing 78% said there were available e-learning tools, while 02 respondents representing 22% responded to non-available e-learning tools in universities of north-west. Hence, majority of the respondents agreed that there were enough available e-learning tools.

Table 10: Academic staffs’ opinion on the accessibility of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Accessible	06	66.7
2	Non accessible	03	33.3
	Total	09	100

Table 10 above shows the academic staff's opinion on the accessibility of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry, the result revealed that there was high level of accessibility of e-learning tools at the universities in north-west, because 06 respondents representing 66.7% said there was a favourable access policy of e-learning tools, while 03 respondents representing 33.3% responded to non-favourable access policy of e-learning tools in universities of north-west. So, there was a high level of accessibility of e-learning tools

Table 11: Academic staffs' opinion on the usability of e-learning tools in universities of north-west Nigeria amidst of covid-19 and rural banditry

S/n	E-learning item	Frequency count	Percentage (%)
1	Used	05	55.6
2	Un-used	04	44.4
	Total	09	100

Table 11 above shows the academic staff's opinion on the usability of e-learning tools in universities of north-west Nigeria amidst covid-19 and rural banditry, the result signified that there was moderate level of usage of e-learning tools at the universities in north-west, because 05 respondents representing 55.6% said there were using of e-learning tools, while 04 respondents representing 44.4% responded to non-usage of e-learning tools in universities of north-west. This implies that there was moderate level of usage of e-learning tools at the universities in north-west, Nigeria.

Discussion

Out of the sixteen (16) vital e-learning tools for teaching and learning in universities of north-west assigned as the standards for the study, all were available in all the universities within the sample, this shows that governments are conscious of the significance of e-learning tools to learners' productivity (Ajayi, 2013; Kulal & Nayak, 2020; Muhammad, Maccido & Isma'il 2020; Abdullahi e'tal, 2021; Egede & Bernadette, 2021;). however, most of the respondents were of the view that e-learning tools had favourable access policy in universities of north-west with the exception of computer system, fax machine, internet connectivity/web environment, electronic board and projectors whose had high level of fairly favourable access policy. This access policy of the e-learning tools in the teaching and learning in the universities of north-west portrays a neglect of some important digital role of technology in instruction in universities in north-west during covid-19 and rural banditry and this was in conformity with the findings of Youssef, & Abu-hashem, (2021). There was an evidence of full reliance on obsolete e-learning tools radio, video cassettes recorder/player, television, Telephone/intercom, CD-ROMs, etc. This was in line with Arum, (2015) who observed that even where some universities are privileged to have all the stated e-learning tools, they were not used and that observation opposed the view of Garba, Guga & Yusuf (2016) whose viewed that today's academic staffs are experiencing undergraduate students who are "digital natives" haven grown up with technology as such these undergraduate students have no understanding why technological gadgets like e-learning tools should not be used in instruction universities of north-west amidst covid-19 and rural banditry.

According to Awotunde and Ugodulunwa (2004) evaluation is the determination of the worth of a thing, and also leads to decisions, evaluation is an extensive and incessant effort to inquire into the effects of availability, accessibility and utilization of e-learning

according to clearly defined goals. In line with this, and the representation from the result of the study, was a sincere indication that there was available, no access policy and moderate usages of most of the e-learning tools in universities of north-west with the exception of modern e-learning tools in term of usage, as such the undergraduate students in the universities were prepared and had learnt significant and useful digital skills needed for poverty eradication, job creation and wealth generation. However, the major problems confronting most of the undergraduate students and academic staff in some universities were that of access policy in some modern e-learning like computer system, projectors, electronic board and that of internet connectivity/web environment which limit their usage during teaching and learning.

Conclusion

Based on the findings, it was concluded that some of the needed e-learning tools for teaching and learning in universities were adequately available. Moreover, there was sufficient evidence from the study signifying that there was a favourable access policy of e-learning tools at the universities in north-west amidst covid-19 and rural banditry and that resulted to usage of once per month and never used during teaching and learning. The shortfall of inadequate use of some of the e-learning tools can be improved upon by suspending accessibility policy and providing steady power supply and engaging academic staffs in a refresher training/ orientation in the use of e-learning tools regularly through workshops/seminars.

Recommendations

- I. University vice chancellors and head of ICT units should try to consider and suspend accessibility policy in usage of e-learning tools to enhance effective use of e-learning tools and resources in the teaching and learning.
- II. The government should ensure sufficient provision of significant and modern e-learning tools for effective teaching and learning.
- III. There is urgent need for the organization of refresher training/orientation in use of e-learning tools to academic staffs regularly through workshops/seminars for academic staffs.

References

- Abdullahi, A.Y (e'tal, 2021). The Impact of the COVID-19 Pandemic on Higher Education in Nigeria: University Lecturers' Perspectives. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 2021, 17(4), 43-66
- Abifarin, M.S. (2015): Modern Approach to Educational Technology. Miclan Associates LTD press, 7IsolaStreet, Egbeda, Lagos, Nigeria.
- Adeoye, I. A., Adanikin, A. F. & Adanikin, A., (2020). Covid-19 and e-learning: Nigeria tertiary education system experience. *International Journal of Research and Innovation in Applied Science (IJRIAS)*. 5, (5), ISSN 2454-612.

- Ajayi, D.W. (2013). An evaluation of Electronic-media availability, accessibility and usability in National Open University of Nigeria in North Central zone. A unpublished Ph.D Dissertation, University of Jos, Plateau State, Nigeria.
- Ali, W. (2020). Online and remote learning in higher education institutes: a necessity in light of covid-19 pandemic. Higher Education Studies. Published by Canadian Center of Science and Education, 10, 3. ISSN 1925-4741.
- Awotunde, P. A. & Ugodulunwa, C.A . (2004). Research Methods in Education. Fab Anieh (Nig) Ltd, Jos, Plateau State. Nigeria.
- Education partnership (TEP) center and Nigerian Economic Summit Group (NESG) (2020): Survey on the responses of key educational stakes holders in Nigeria and the adoption of learning alternatives by students and parent. Learning in pandemic and learning during covid-19 pandemic.
- Egede, C. & Bernadette, B (2021) lecturers' perception of their competence to teach online during the covid-19 lockdown: a post-training evaluation.
- Hassan, M.N; Aliyu, F.; Aliyu, H.; Maccido, I. & Muhammad, N.D. (2022). EDU 302: ICT in Education a lecture guide to Undergraduate students in Sokoto State University.
- Ibanga, U.A. (2002). Statistics for social sciences, Jos: Center for developmental studies.
- Jacob, A. K. & Abdulgafar, A. O., (2020). Mitigating the impact of Covid-19 on the teaching and learning of science in the Nigerian higher education. *International Journal of Research and Innovation in Social Science (IJRISS)*, 4, (6), ISSN 2454-6186.
- Kulal, A. & Nayak, A. (2021). A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District. 3. *Asian Association of Open Universities Journal Volume 15(3)*
- Mogaji, E., (2019). Types and Location of Nigerian Universities. Research Agenda Working Papers. Vol 2019 No 7 pp 92-103.
- Muhammad, Isma'il & Maccido (2020) Lecturers' awareness and utilisation of Blended Learning for teaching educational courses in colleges of education in Sokoto state, Nigeria. *Journal of Education in Developing Areas (JEDA) Vol. 28, (1) March 2020 ISSN: 189420X*
- Muzaffar, A.W.; Tahir, M.; Anwar, M.W.; Chaudry, Q.; Mir, S.R.; Rasheed, Y. A, (2020). Systematic Review of Online Exams Solutions in E-learning: Techniques, Tools, and Global Adoption. Retrieved from: arxiv 2010.07086 on 22/4/2022.
- National Universities Commission (2015). List of Universities. Retrieved on 23/5/2022 from <http://Avwww.nuc.edu.ng/pages/Universities.asp>, p. 1-3.
- National Universities Commission (2018). Nigeria University System Digest. Retrieved on 23/5/2022 from <http://info.nuc.edu.ng/pages/Universities>.

- Nlebem, A. (2020). FG orders closures of all schools in Nigeria as corona virus spreads. Business day. Retrieved from <http://businessday.ng/coronavirus/article/fg-order-closure-of-all-school-in-nigeria-as-coronavirus-spread/> on 26/5/2022.
- Rufa'i, M.A. (2021). 'I am a bandit' a Decade of Research on Armed Banditry in Zamfara State 15th University Seminar Presented at Usmanu Danfodiyo University, Sokoto Auditorium, Main Campus, 9th September, 2021.
- Schleicher, A., (2020). The impact of covid-19 on education-insights from education at a glance. Published under the responsibility of the Secretary-General of the OECD.
- Singh, U & Chantahien, C. (2008). Availability and Utilization of Educational Media in Secondary Schools in Thailand. Proceeding of international conference of National Association of Educational Media and Technology. International Conference Proceeding Vol. 1.
- Wasagu, M.A. (2016). Human Security and Challenges of Innovative Education. A lead paper presented in Sokoto State University 1st International Conference in Education held in Sokoto State University, Sokoto, Sokoto State Nigeria.
- Zayabalaradjane, Z. (2020). COVID-19 Strategies for Online Engagement of Remote Learners. Retrieved on 23 /5/2022 from F1000 Research, 9, 246.
- Zubairu, S. A. (2014). Assessment of availability, accessibility and utilization of information and communication technology (ICT) resources in content delivery among lecturers in federal colleges of education in Nigeria (Published Doctoral Dissertation, Ahmadu Bello University, Zaria, Nigeria).
- Youssef, M.S & Abu-hashem, M.A (2021). Analysing lecturers' perceptions on traditional vs. distance learning: A conceptual study of emergency transferring to distance learning during COVID-19 pandemic. *Journal of Education and Information Technologies* volume 27, pages 3225–3245